

# *Greening Brownfields: A Look at Planning & Outcomes*

Panel 3, Bringing Nature Into the City  
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# Outline

- Background
- What type of greening is taking place?
- What are the key obstacles to greening?
- What are the benefits associated with greening?
- How can we put “Nature” back into greening?
- Project Examples
- Lessons from the “Field”

# Background

- Brownfields & Greening
  - 500,000+ brownfield sites in the US
  - 25,000 brownfield sites, 95,000 acres in 205 US cities (US Conference of Mayors 2003)
  - Average brownfield site = 5 acres
  - Greening accounts for 4%-5% of brownfield projects (based on US Mayors 2003 data)
  - In a survey of New Jersey residents by Greenberg and Lewis (2000) 90% identified parks and play areas as the most highly desired of all land-uses for their brownfields

# What type of greening is taking place?

- Green Space Generation on Brownfields-30 cases
  - Total generation = 2,400 acres
  - Size range = 1 - 1,163 acres
  - 13 acres (median), 84 acres (mean)
- Types of Green Space

	TOT	US	Tor.
– Linear Parks (restoration/passive)	10	8	2
– Neighborhood parks (active/passive)	7	5	2
– Large multiple use parks	5	3	2
– Ecological/Natural Habitat	5	3	2
– Parkettes	3	1	2

# What type of greening is taking place?

- How are contamination issues managed?
  - Most common methods include: capping (soil/concrete/wetland=10 projects); monitoring/natural attenuation (6 projects); Dig-and-dump (6 projects); technological approach (6 projects); Ongoing.
- How much will the project cost?
  - Combined average cost \$4.5 million/project or \$744,000/acre
  - Assessment & cleanup  $\cong$  25% of capital costs
- Who pays?
  - Public sector takes on most capital costs
- Who worries?

# What are the key obstacles?

- Key Obstacles (US project coordinators)
  - High costs & lack of funding
  - Remediation issues
  - Land acquisition
  - Redevelopment & long-term maintenance issues
  - Lack of staff expertise in green space planning
  - Public distrust
  - Green space not considered an internal priority

# What are the benefits?

- Key Benefits (US project coordinators)
  - Increasing areas for public recreation and use
  - Economic stimulation
  - Improvement of neighborhood “aesthetics”
  - Habitat creation/conservation
  - Connecting places & spaces
  - Environmental remediation
  - Trail development

# Benefits in relation to use

- 72% of respondents visited the site at least once per week, with 25% visiting every day
- Park Activities (Mean score: 1 never, 2 sometimes, 3 often)
  - Walking/hiking (2.47)
  - Enjoying the scenery (2.03)
  - Relaxing, resting or hanging-out (1.89)
  - Visiting or meeting friends (1.57)
  - Jogging/running (1.57)
  - Biking (1.57)
  - Traveling through it to get to another destination (1.54)
  - Using playground (1.54)
  - Enjoying historic or interpretive signs/information (1.53)

# Benefits in terms of quality of life

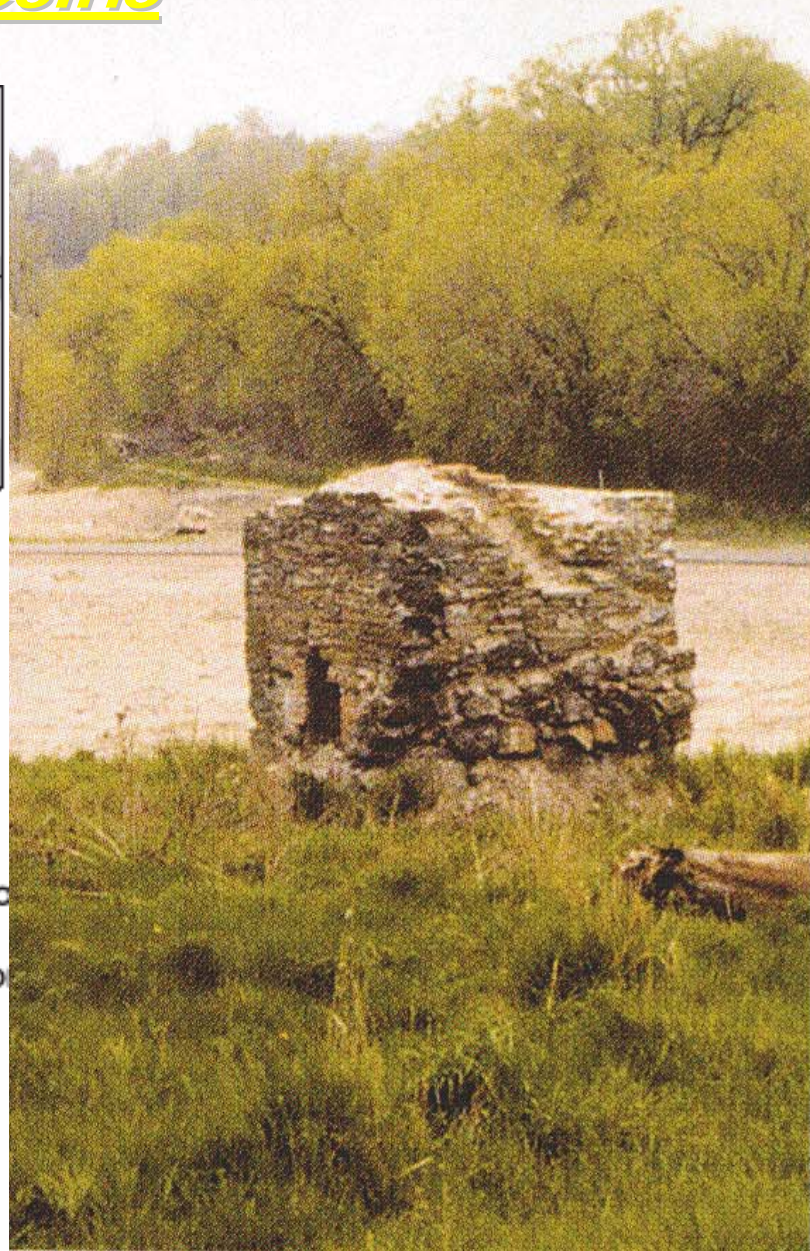
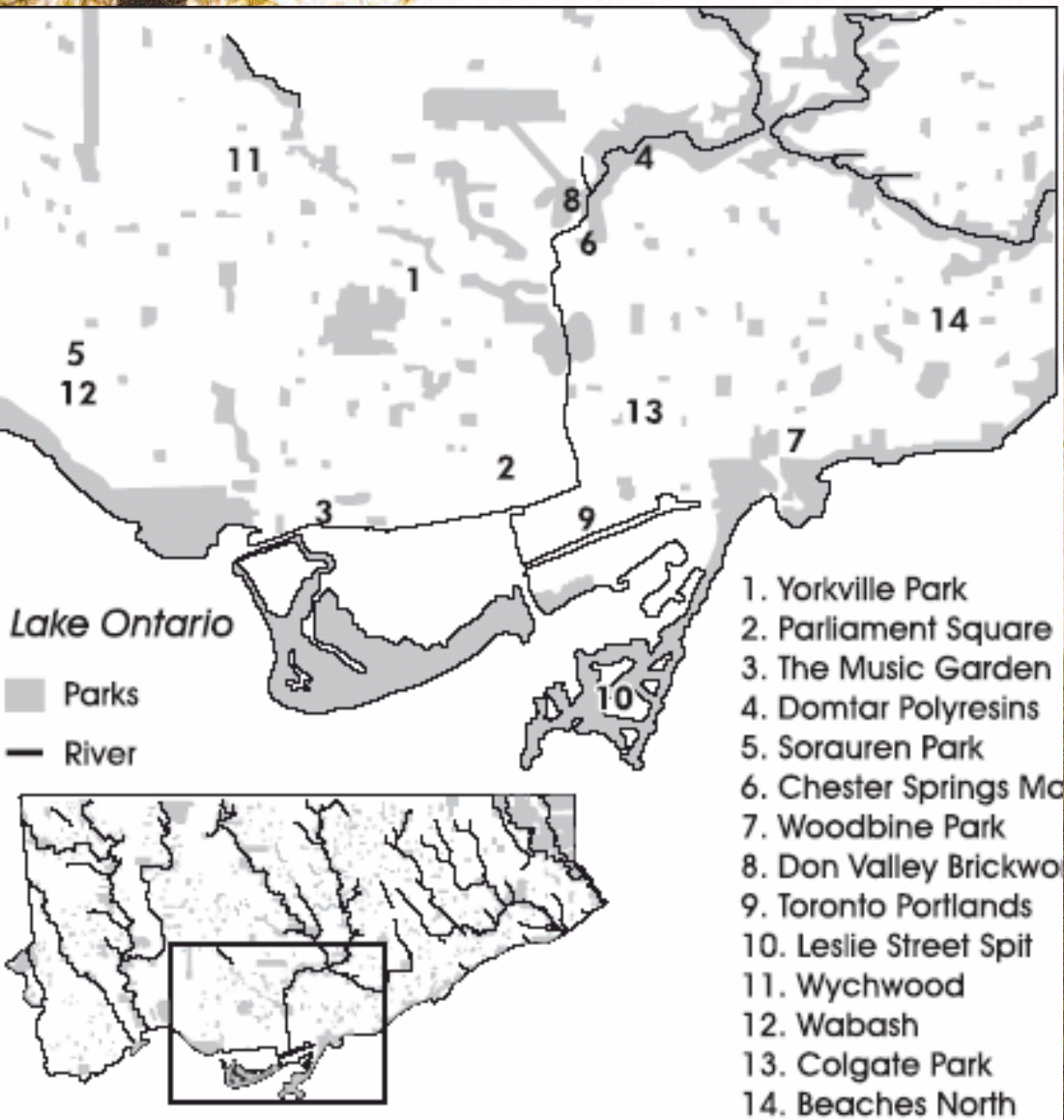
- Community Quality of Life Impacts (Rank & Overall Mean 1-5)
  1. Scenic beauty (4.74)
  2. Trails for walking, hiking and biking (4.66)
  3. Neighborhood appeal (4.66)
  4. Having natural areas present (4.63)
  5. Access to recreational areas (4.61)
  6. Community pride (4.59)
  7. Blight removal (4.51)
  8. Personal fitness (4.49)
  9. Property values (4.46)
  10. Access to quiet areas (4.46)

# How can we put “Nature” back into greening?

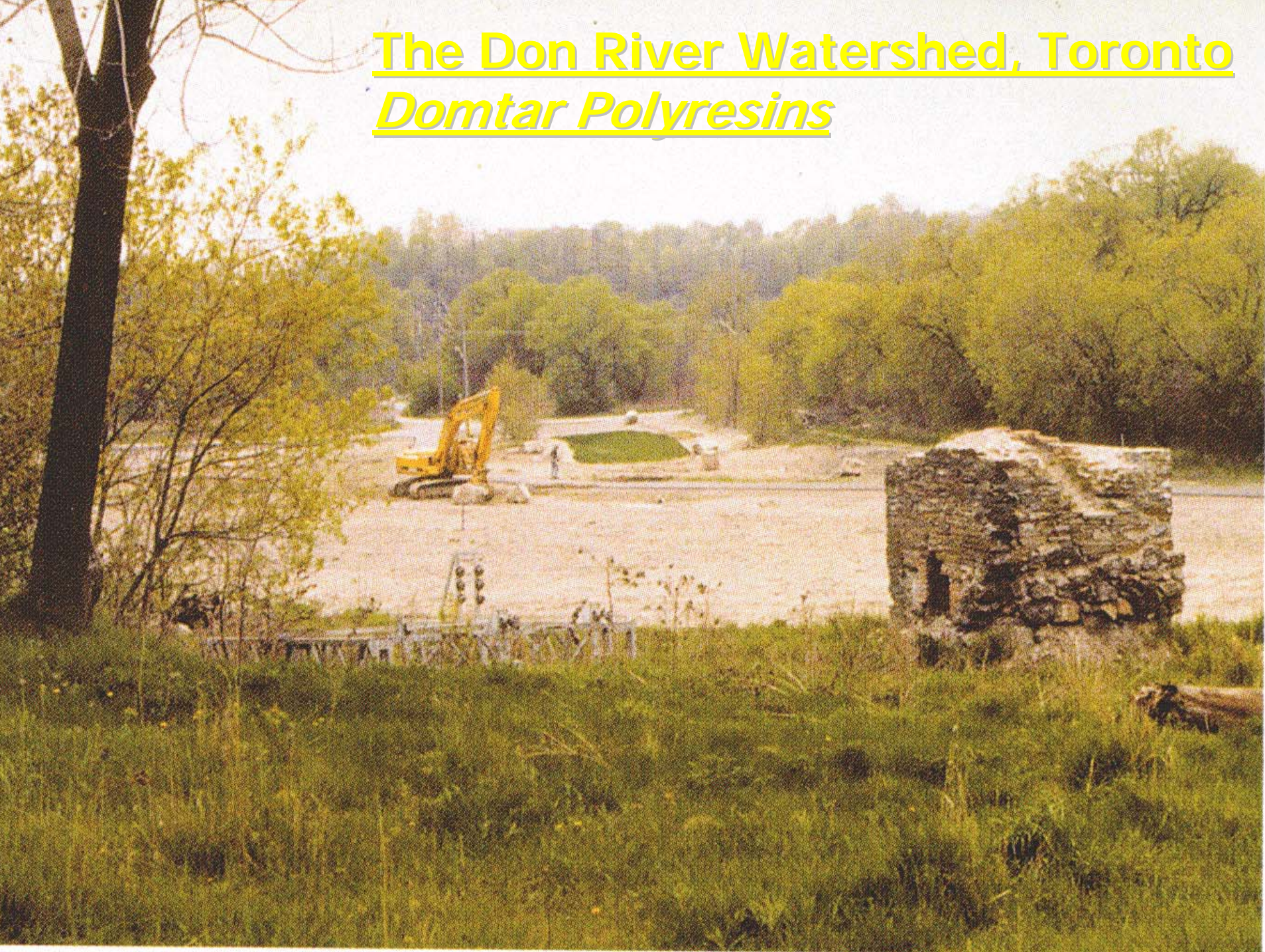
- Barriers to maximizing environmental benefits
  - Nature in the City = Oxymoron, particularly on brownfields
  - Nature is an aesthetic, & not a mess of weeds
  - Nature and “safe” recreation don’t always mix
  - \$60,000 an acre + cleanup costs for wildflowers, are you crazy
- Project Examples
  - Don River Watershed, Toronto, Ontario
  - Nine Mile Run, Pittsburgh, Pennsylvania

# The Don River Watershed, Toronto

## *Domtar Polyresins*



# The Don River Watershed, Toronto *Domtar Polyresins*







# Don River Watershed, Toronto The Brickworks

North Slope

← Mud Creek

DVP

Mount  
Pleasant  
Trail

Bayview

Don  
River

Photo by Mark Wilson













## Don River Watershed, Toronto *Chester Springs Marsh*





Don River Watershed, Toronto  
*Proposed Mouth of the Don River*







**Proposed Mouth of the Don River**  
The Task Force to Bring Back the Don

Hough Woodland Naylor Dance Leicester  
February 2000

# Nine Mile Run, Pittsburgh, Pennsylvania













# Lessons from the "Field"

- Brownfields clearly represent a valuable opportunity for greening urban areas & provide numerous benefits
- Benefits associated with recreation, aesthetics, and economic development still paramount, while nature is secondary
- Enhancing nature-based outcomes requires:
  - Greater role for parks & conservation departments
  - Greater role for non-profits involved in nature preservation
  - Environmental reporting to assess baseline conditions & track environmental benefits over time
  - Design & innovative remediation technology that uses nature to reduce costs
  - Increased funding for greening from sources with an interest in natural restoration & less reliance on other sources
  - Increased awareness of their ecological potential

# Thank You

- Funding for greening research:
  - USDA Forest Service, North Central Research Station
  - University of Wisconsin-Milwaukee
- Brownfield Research Consortium (UW-Milwaukee)  
website: [www.uwm.edu/MilwaukeeIdea/CEO/brownfields/index.html](http://www.uwm.edu/MilwaukeeIdea/CEO/brownfields/index.html)